JOURNAL OF MOLECULAR RECOGNITION (J. Mol. Recogn.)

CONTENTS

Volume 12 Numbers 1–6

Number 1 January/February 1999

Editorial

Molecular recognition in the post-reductionist era
M. H. V. Van Regenmortel 1

Reviews

Isothermal titration calorimetry and differential scanning calorimetry as complementary tools to investigate the energies of biomolecular recognition
I. Jelesarov and H. R. Bosshard 3

Comparison of the three-dimensional structures of a humanized and a chimeric Fab of an anti-γ-interferon antibody
Z.-C. Fan, L. Shan, B. Z. Goldsteen, L. W. Guddat, A. Thakur, N. F. Landolfi, M. S. Co, M. Vasquez, C. Queen, P. A. Ramsland and A. B. Edmundson 19

Research Articles

Epitope mapping of a monoclonal antibody directed against the α-subunit of phosphofructokinase-1 from *Saccharomyces cerevisiae* by screening phage display libraries
M. Hollborn, J. Kirchberger, G. Birkenmeier and G. Kopperschläger 33

Receptins: a novel term for an expanding spectrum of natural and engineered microbial proteins with binding properties for mammalian proteins
G. Kronvall and K. Jonsson 38

Synthesis and properties of new coenzyme mimics based on the artificial coenzyme CL4
R. J. Ansell, D. A. P. Small and C. R. Lowe 45

Design, synthesis and characterisation of affinity ligands for glycoproteins
U. D. Palanisamy, A. Hussain, S. Iqbal, K. Sproule and C. R. Lowe 57

A strategy for the generation of biomimetic ligands for affinity chromatography. Combinatorial synthesis and biological evaluation of an IgG binding ligand
S. F. Teng, K. Sproule, A. Hussain and C. R. Lowe 67

Number 2 March/April 1999

Review

Advances in surface plasmon resonance biomolecular interaction analysis mass spectrometry (BIA/MS)
R. W. Nelson and J. R. Krone 77

Biochemical purification and partial characterization of a murine macrophage surface receptor possessing specificity for small aromatic moieties including fluorescein
A. Cherukuri, J. Nelson and E. W. Voss, Jr. 94

Fine mapping of the antigen–antibody interaction of scFv215, a recombinant antibody inhibiting RNA polymerase II from *Drosophila melanogaster*
Z. Liu, D. Song, A. Kramer, A. C. R. Martin, T. Dandekar, J. Schneider-Mergener, E. K. F. Bautz and S. Dübel 103

Processing of PDGF gene products determines interactions with glycosaminoglycans
F. Lustig, J. Hoebeke, C. Simonson, G. Östergren-Lundén, G. Bondjers, U. Rüetchi and G. Fager 112

Sequence-specific interactions of minor groove binders with restriction fragments of cDNAs for H tau 40 protein and MAP kinase 2. A qualitative and quantitative footprinting study
L. Kittler, B. C. Baguley, G. Lober and M. J. Waring 121

Unique single-domain antigen binding fragments derived from naturally occurring camel heavy-chain antibodies
S. Muyldermans and M. Lauwereys 131

Targeting of the N-terminal domain of the human papillomavirus type 16 E6 oncoprotein with monomeric ScFvs blocks the E6-mediated degradation of cellular p53
C. Giovane, G. Travé, A. Briones, Y. Lutz, B. Wasylyk and E. Weiss 141

Forthcoming events 153

Number 3 May/June 1999

Review
Characterization of protein-glycolipid recognition at the membrane bilayer
S. V. Evans and C. R. MacKenzie 155

Recognition of defined epitopes by affinity-purified anti-immunoglobulin Fab autoantibodies isolated from HIV-infected humans
J. J. Marchalonis, A. Garza, D. F. Lake, W. J. Landsperger and C. Süsal 169

Prediction of the binding energy for small molecules, peptides and proteins
M. Schapira, M. Totrov and R. Abagyan 177

Identification of peptide mimotopes for the fluorescein hapten binding of monoclonal antibody B13-DE1
V. Böttger, L.-E. Peters and B. Micheel 191

The use of biosensor technology for the engineering of antibodies and enzymes
A. Huber, S. Demartis and D. Neri 198

Forthcoming events 217

Number 4 July/August 1999

A model for a glutamate receptor agonist antibody-binding site
S. McDonald, N. G. Carlson, L. C. Gahring, K. R. Ely and S. W. Rogers 219

On the protein–protein diffusional encounter complex
R. R. Gabdoulline and R. C. Wade 226

Comparative molecular modeling analysis of 5-amidinoindole and benzamidine binding to thrombin and trypsin: specific H-bond formation contributes to high 5-amidinoindole potency and selectivity for thrombin and factor Xa
Y. Zhou and M. E. Johnson 235

Evidence for conformationally different states of interleukin-10: binding of a neutralizing antibody enhances accessibility of a hidden epitope
U. Reineke, J. Schneider-Mergener, R. W. Glaser, R.-D. Stigler, M. Seifert, H.-D. Volk and R. Sabat 242

Interference of rheumatoid factor activity by aspartame, a dipeptide methyl ester
P. A. Ramsland, B. F. Movafagh, M. Reichlin and A. B. Edmundson 249

Construction and characterization of two anti-sweetener single chain antibodies using radioligand binding, fluorescence and circular dichroism spectroscopy
D. W. Pledger, T. C. Brodnicki, B. L. Graham, S. Tetin, D. M. Kranz and D. S. Linthicum 258

Unraveling the effect of changes in conformation and compactness at the antibody V_L-V_H interface upon antigen binding
J.-L. Pellequer, S.-w. W. Chen, V. A. Roberts, J. A. Tainer and E. D. Getzoff 267

Forthcoming events 276

Number 5 September/October 1999

Editorial
Biosensors and the search for structure–activity correlations
M. H. V. Van Regenmortel 277

Improving biosensor analysis
D. G. Myszka 279

Affinity analysis of non-steady-state data obtained under mass transport limited conditions using BIAcore technology
R. Karlsson 285

The influence of transport on the kinetics of binding to surface receptors: applications to cells and BIAcore
B. Goldstein, D. Coombs, X. He, A. R. Pineda and C. Wofsy 293

Active concentration measurements of recombinant biomolecules using biosensor technology
G. Zeder-Lutz, A. Benito and M. H. V. Van Regenmortel 300

Exploring buffer space for molecular interactions
K. Andersson, D. Areskoug and E. Hardenborg 310

Biosensor analysis of the interleukin-2 receptor complex
S. F. Liparoto and T. L. Ciardelli 316

Real time *in vitro* analysis of transcription by RNA polymerase on immobilised DNA fibres
I. K. Pemberton and M. Buckle 322

The ion channel switch biosensor
G. Woodhouse, L. King, L. Wieczorek, P. Osman and B. Cornell 328

Erratum
Interference of rheumatoid factor activity by aspartame, a dipeptide methyl ester
P. A. Ramsland, B. F. Movafagh, M. Reichlin and A. B. Edmunson 335

Number 6 November/December 1999

Effects of 5-[S-(2,4-dinitrophenyl)-thio]-2′-deoxyuridine analog incorporation on the structure and stability of DNA hybrids: implications for the design of nucleic acid probes
E. Yuriev, D. Scott and M. M. Hanna 337

Characterization of the sequential non-covalent and covalent interactions of the antitumour antibiotic hedamycin with double stranded DNA by NMR spectroscopy
S. Pavlopoulos, W. Bicknell, G. Wickham and D. J. Craik 346

Molecular recognition events involved in the activation of the growth hormone receptor by growth hormone
S. N. Behncken and M. J. Waters 355

Conformational homogeneity in molecular recognition by proteolytic enzymes
J. D. A. Tyndall and D. P. Fairlie 363

Towards understanding the mechanisms of molecular recognition by computer simulations of ligand–protein interactions
G. M. Verkhivker, P. A. Rejto, D. Bouzida, S. Arthurs, A. B. Colson, S. T. Freer, D. K. Gehlhaar, V. Larson, B. A. Luty, T. Marrone and P. W. Rose 371

Survey of the 1998 optical biosensor literature
D. G. Myszka 390

Forthcoming events 409

Author index 410

Keyword index 411